

In the Claims:

Please amend the claims as follows:

1. (currently amended) A method for non-contact measurement of a dimension and/or an electrical property of an electrically conductive object to be measured, the method comprising:

placing a transmitter coil on one side of the object to be measured,

placing a receiver coil on ~~the other~~ another, opposite, side of the object to be measured,

generating a magnetic field in the transmitter coil,

suddenly changing the magnetic field generated in the transmitter coil,

detecting ~~the a~~ voltage induced in the receiver coil,

determining ~~the a~~ period of time that elapses from ~~the a~~ time of the change of the magnetic field in the transmitter coil up to ~~the a~~ time when a voltage starts being induced in the receiver coil,

determining ~~the a~~ maximum magnitude of the voltage induced in the receiver coil, and based on measured values received, calculating the ~~thickness~~ dimension and/or electrical conductivity of the object to be measured,

wherein the voltage induced in the receiver coil is integrated, and wherein the dimension and/or electrical conductivity of the object to be measured is calculated based on a value of the integrated signal at at least two different points in time.

2. (currently amended) The method according to claim 1, wherein the ~~thickness or~~

dimension and/or electrical conductivity of the object to be measured is calculated ~~on the basis of~~
based on the period of time and the maximum voltage induced in the receiver coil.

3. (currently amended) The method according to claim 1, wherein the ~~thickness or~~
dimension and/or electrical conductivity of the object to be measured is calculated ~~on the basis of~~
~~the based on~~ a product of the period of time and the maximum voltage induced in the receiver
coil.

4. (currently amended) The method according to claim 1, wherein the ~~thickness or~~
dimension and/or electrical conductivity of the object to be measured is calculated ~~on the basis of~~
~~the based on~~ a reciprocal value of ~~the a~~ product of ~~the a~~ square of the maximum voltage induced
in the receiver coil and the period of time.

5. (currently amended) The method according to claim 1, wherein the voltage induced in
the receiver coil is integrated and wherein the ~~thickness or~~ dimension and/or electrical
conductivity of the object to be measured is calculated ~~on the basis of the based on a~~ value of ~~this~~
the integrated signal.

6. (cancelled)

7. (currently amended) The method according to claim 6, 1, wherein the two different
points in time are determined in advance.

8. (currently amended) The method according to claim 6, 1, wherein the two different points in time are located within the time interval, that is, between ~~the a~~ time for a sudden ~~the~~ sudden change of the magnetic field in the transmitter coil and ~~the a~~ time when the voltage induced in the receiver coil (7) has safely dropped below its ~~the~~ maximum value.

9. (currently amended) The method according to claim 6, 1, wherein the two different points in time are located within the time interval but after the period of time.

10. (currently amended) A measuring device for non-contact determination of one or more sought properties of an object to be measured, the measuring device comprising:
at least one transmitter coil and at least one receiver coil ~~located in~~ spaced apart from relationship ~~to~~ each other, wherein the transmitter coil is arranged to generate a changeable magnetic field, and the receiver coil is arranged to generate a voltage when being subjected to a change of magnetic field,

a magnetic field generator configured to generate means for generating a changeable magnetic field in the transmitter coil and a detector configured to detect means for detecting a voltage induced in the receiver coil,

a control circuit arranged to initiate a sudden change of the magnetic field in the transmitter coil,

a sensor means arranged to determine the time for the penetration of the magnetic field through the object to be measured and hence the time period,

a detector means arranged to detect the maximum induced voltage in the receiver coil,
and that

a calculator means arranged to calculate, based on these values, the thickness or electrical conductivity of the object to be measured, and

circuits arranged to measure the voltage induced in the receiver coil at two different times after the time for interruption in the transmitter coil.

11. (previously amended) The measuring device according to claim 10, further comprising:

an integrator arranged to integrate the voltage signal induced in the receiver coil.

12. (cancelled)

13. (previously amended) The measuring device according to claim 10, further comprising:

circuits arranged to detect the period of time that elapses from the time for the change of the magnetic field in the transmitter coil up to the time when a voltage starts being induced in the receiver coil.

14. (currently amended) A computer program product, comprising:

a computer readable medium; and

computer code recorded on the computer readable medium and executable by a processor for carrying out the steps of

~~placing a transmitter coil on one side of the object to be measured,~~

~~placing a receiver coil on the other, opposite, side of the object to be measured,~~

generating a magnetic field in ~~the a~~ transmitter coil arranged on a first side of an object to be measured,

suddenly changing the magnetic field generated in the transmitter coil,

detecting ~~the a~~ voltage induced in ~~the a~~ receiver coil arranged on a second side of the object to be measured,

determining ~~the a~~ period of time that elapses from ~~the a~~ time of the change of the magnetic field in the transmitter coil up to ~~the a~~ time when a voltage starts being induced in the receiver coil,

determining ~~the a~~ maximum magnitude of the voltage induced in the receiver coil, and based on measured values received, calculating the ~~thickness~~ dimension and/or electrical conductivity of the object to be measured,

wherein the voltage induced in the receiver coil is integrated, and wherein the dimension and/or electrical conductivity of the object to be measured is calculated based on a value of the integrated signal at at least two different points in time.

15. (cancelled)

16. (previously amended) The computer program product according to claim 14, wherein the computer code is further for carrying out the step of at least partly transmitting the computer code via a network.

17. (cancelled)

18. (previously presented) The computer program product according to claim 16,
wherein the network is the internet and the computer code is at least partially transmitted via the
internet.